Remarks

Applicants respectfully request reconsideration of the present U.S. Patent
application as amended herein. Claims 1, 2, 7, 11, 12, 13, and 14 have been amended.
No claims have been added. Claims 2-4, 6, 8-10, and 15-31 have been cancelled. Thus,
claims 1, 2, 5, 7, 11-14, and 32 are pending.

CLAIM REJECTIONS – 35 U.S.C. § 102(b)

Claims 1-6, 11 and 14 were rejected as being anticipated by U.S. Patent No.
6,449,625 issued to Wang (*Wang*). Claims 3, 4 and 6 have been canceled. Therefore, the
rejection of claims 3, 4 and 6 is moot. For at least the reasons set forth below, Applicants
submit that claims 1, 2, 5, 11 and 14 are not anticipated by *Wang*.

Claim 1 recites:

> an array of non-volatile memory cells; and
> a stack controller coupled to receive an address and to determine
> an appropriate address for accessing values in a stack stored in a subset of
> the array of non-volatile memory cells, the stack having a stack depth
> configured in a nonvolatile memory to store parameter values, where each
> memory write invalidates previous data and further wherein the stack
> controller updates a pointer to a first valid word in the stack, the stack
> controller to maintain the stack utilizing two blocks of the non-volatile
> memory cells and to cause a first block to be erased when each word
> within the first block is invalid and the values in the stack are stored in a
> second block of the non-volatile memory.

Similarly, claim 11 recites:

> receiving an address corresponding to an access to the stack;
> maintaining a nonvolatile stack to store parameter values in words
> of a nonvolatile memory where a write of the nonvolatile stack invalidates
> previous instructions or data stored in the nonvolatile stack;
> updating a pointer to a first valid word in the stack

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maintaining the stack utilizing two blocks of the non-volatile memory cells and to cause a first block to be erased when each word within the first block is invalid and the values in the stack are stored in a second block of the non-volatile memory.

Thus, Applicants claim monitoring invalid values and erasing a block when all words in the block are invalid.

In contrast to the claimed invention, *Wang* discloses maintaining two logical stacks and performing garbage collection after each access rather than when all blocks are invalid. See Abstract. Therefore, *Wang* does not anticipate claims 1 and 11.

Claims 2 and 5 depend from claim 1. Claim 14 depends from claim 11. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 2, 5 and 14 are not anticipate by *Wang* for at least the reasons set forth above.

CLAIM REJECTIONS – 35 U.S.C. § 103(a)

Claims 7, 12 and 13 were rejected as being unpatentable over *Wang* in view of U.S. Patent No. 5,568,423 issued to Jou, et al. (*Jou*). *Jou* is cited to teach a smart stack controller. Further, the Office Action asserts that distribution of write cycles indicates a smart stack controller. Applicants submit that, as described in the specification, a smart stack controller is not defined by a single function.

Claims 7, 12 and 13 are dependent claims that depend from independent claims discussed above. *Jou* does not cure the deficiencies of *Wang* set forth

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above. Therefore, no combination of *Wang* and *Jou* can teach or suggest the invention as claimed in claims 7, 12 and 13.

Claim 32 was rejected as being unpatentable over *Wang* in view of U.S. Patent Publication No. 2003/0061436 of Royer, Jr., et al. (*Royer*). *Royer* is cited to disclose a polymer memory. See Office Action at page 7. *Royer* does not cure the deficiencies of *Wang* set forth above. Therefore, no combination of *Wang* and *Royer* can teach or suggest the invention as claimed in claim 32.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1, 2, 5, 7, 11-14, and 32 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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